AD-A080 819 FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON AFB OH F/G 9/1
HIGH-VOLTAGE VARIABLE CAPACITANCE CAPACITOR,(U)
MAR 79 I I KALYATSKIY, V I KURETS
UNCLASSIFIED FTD-ID(RS)T-0261-79 NL

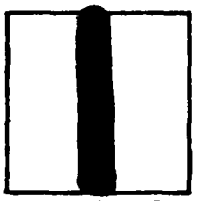
END
DATE FILMED
3-80
DDC

PHOTOGRAPH THIS SHEET

ADA080819

DTIC ACCESSION NUMBER

LEVEL



INVENTORY

FTD-ID(RS)T-0261-79

DOCUMENT IDENTIFICATION

DISTRIBUTION STATEMENT A
Approved for public release;
Distribution Unlimited

DISTRIBUTION STATEMENT

ACCESSION FOR	
NTIS	GRA&I
DTIC	TAB
UNANNOUNCED	
JUSTIFICATION	
BY	
DISTRIBUTION /	
AVAILABILITY CODES	
DIST	AVAIL AND/OR SPECIAL
A	

DISTRIBUTION STAMP

DDC
RECEIVED
FEB 19 1980
D

DATE ACCESSIONED

DATE RECEIVED IN DTIC

PHOTOGRAPH THIS SHEET AND RETURN TO DTIC-DDA-2

DTIC FORM OCT 79 70A

DOCUMENT PROCESSING SHEET

FTD-ID(RS)T-0261-79

FOREIGN TECHNOLOGY DIVISION

HIGH-VOLTAGE VARIABLE CAPACITANCE CAPACITOR

by

I. I. Kalyatskiy, V. I. Kurets, et al.

EDITED TRANSLATION

FTD-ID(RS)T-0261-79 14 March 1979

MICROFICHE NR: FTD-79-C-000395

HIGH-VOLTAGE VARIABLE CAPACITANCE CAPACITOR

By: I. I. Kalyatskiy, V. I. Kurets, et al.

English pages: 2

Source: USSR Patent Nr. 337837, 5 May 1972, pp. 1-2

Country of origin: USSR
Translated by: SCITRAN
F33657-78-D-0619
Requester: FTD/TQTD

PREPARED BY:

TRANSLATION DIVISION
FOREIGN TECHNOLOGY DIVISION
WP-AFB, OHIO.

U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

Block	Italic	Transliteration	Block	Italic	Transliteration
А а	*А а*	A, a	Р р	*Р р*	R, r
Б б	*Б б*	B, b	С с	*С с*	S, s
В в	*В в*	V, v	Т т	*Т т*	T, t
Г г	*Г г*	G, g	У у	*У у*	U, u
Д д	*Д д*	D, d	Ф ф	*Ф ф*	F, f
Е е	*Е е*	Ye, ye; E, e*	Х х	*Х х*	Kh, kh
Ж ж	*Ж ж*	Zh, zh	Ц ц	*Ц ц*	Ts, ts
З з	*З з*	Z, z	Ч ч	*Ч ч*	Ch, ch
И и	*И и*	I, i	Ш ш	*Ш ш*	Sh, sh
Й й	*Й й*	Y, y	Щ щ	*Щ щ*	Shch, shch
К к	*К к*	K, k	Ъ ъ	*Ъ ъ*	"
Л л	*Л л*	L, l	Ы ы	*Ы ы*	Y, y
М м	*М м*	M, m	Ь ь	*Ь ь*	'
Н н	*Н н*	N, n	Э э	*Э э*	E, e
О о	*О о*	O, o	Ю ю	*Ю ю*	Yu, yu
П п	*П п*	P, p	Я я	*Я я*	Ya, ya

*ye initially, after vowels, and after ъ, ь; e elsewhere.
When written as ё in Russian, transliterate as yë or ë.

RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

Russian	English	Russian	English	Russian	English
sin	sin	sh	sinh	arc sh	$\sinh^{-1}$
cos	cos	ch	cosh	arc ch	$\cosh^{-1}$
tg	tan	th	tanh	arc th	$\tanh^{-1}$
ctg	cot	cth	coth	arc cth	$\coth^{-1}$
sec	sec	sch	sech	arc sch	sech^{-1}
cosec	csc	csch	csch	arc csch	csch^{-1}

Russian	English
rot	curl
lg	log

Committee on Inventions and Discoveries in the USSR Council of Ministers

DESCRIPTION OF INVENTION
For the Inventor's Patent
Subject to Patent No. _
Applied for 13.X.1967 (No. 1189985/26-9)
accompanied by application form No. _
Priority _
Published 05.V.1972. Bulletin No. 15
Date of publication of description
1.VI.1972

Inventors: I. I. Kalyatskiy, V. I. Kurets, V. N. Ponomarev, V. N. Safronov and V. A. Tsukerman

Applicant: The Tomsk S. M. Kirov Order of the Red Banner of Labor Polytechnical Institute

HIGH-VOLTAGE VARIABLE CAPACITANCE CAPACITOR

1

The invention belongs to the field of radio engineering, in particular to the shaping of high-voltage pulses of voltage and current.

High-voltage variable capacitance capacitors which consist of two cylindrical plates with a conducting rod and control capacitances are well known.

The purpose of the invention is smooth regulation of the capacitance of the capacitor when the intrinsic inductance is constant.

The proposed capacitor is shown in the drawing.

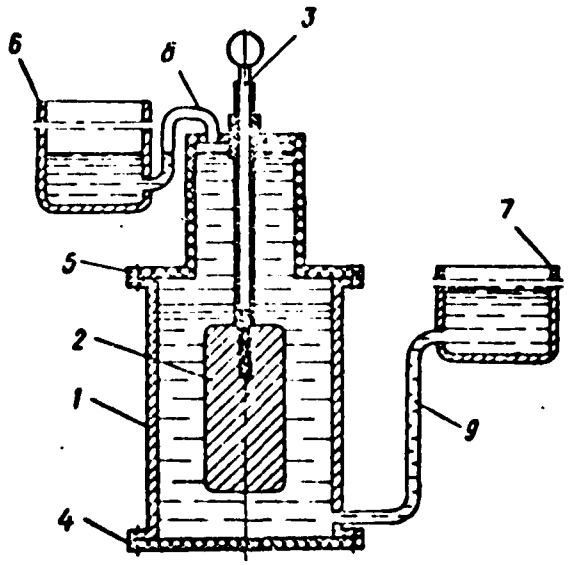
The high-voltage capacitor consists of the cylindrical plate 1 with ground and the plate 2 connected to the conducting rod 3 which has polyethylene insulation. A high-voltage pulse is fed to the rod.

The air-tightness of the capacitor is maintained by the insulated bottom 4 and the insulating cover 5. Coaxiality of the cylinders is ensured due to threaded fastening of the conducting rod 3 in the cover 5. Transformer oil serves as a dielectric in the upper part of the capacitor, and glycerin in the lower part.

The volume occupied by the transformer oil and the glycerin is regulated smoothly by means of the reservoirs 6 and 7 through the tubing 8 and 9. The required magnitude of the capacitor capacitance is calculated from the conditions for the equality of the volumes occupied by the glycerin and the transformer oil.

Subject of the Invention

The high-voltage variable capacitance capacitor consisting of two cylindrical casings with a conducting rod and control capacitances is distinguished by the fact that in order to regulate smoothly the magnitude of the capacitance of the capacitor when the intrinsic inductance is constant, two liquids are used as dielectrics. These liquids do not mix, they have different dielectric and physical properties, and their volumes are regulated in the capacitor.



DISTRIBUTION LIST

DISTRIBUTION DIRECT TO RECIPIENT

ORGANIZATION		MICROFICHE
A205	DMATC	1
A210	DMAAC	2
B344	DIA/RDS-3C	9
C043	USAMIIA	1
C509	BALLISTIC RES LABS	1
C510	AIR MOBILITY R&D LAB/FIO	1
C513	PICATINNY ARSENAL	1
C535	AVIATION SYS COMD	1
C591	FSTC	5
C619	MIA REDSTONE	1
D008	NISC	1
H300	USAICE (USAREUR)	1
P005	DOE	1
P050	CIA/CRB/ADD/SD	1
NAVORDSTA (50L)		1
NASA/KSI		1
AFIT/LD		1
LLL/Code L-389		1
NSA/1213/TDL		2

ORGANIZATION		MICROFICHE
E053	AF/INAKA	1
E017	AF/RDXTR-W	1
E403	AFSC/INA	1
E404	AEDC	1
E408	AFWL	1
E410	ADTC	1
	FTD	
	CCN	1
	ASD/FTD/NIIS	3
	NIA/PHS	1
	NIIS	2